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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,163	08/30/2004	Juergen Schroeder	257542US0PCT	5466

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EXAMINER

EL ARINI, ZEINAB

ART UNIT PAPER NUMBER

1746

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/505,163	Applicant(s) SCHROEDER ET AL.	
	Examiner Zeinab E. EL-Arini	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The request for reconsideration and declaration filed 11/24/06 have been acknowledged and entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/51159 A1 (WO'159)(Neutzner et al.) in combination with Dunson et al. (3,969,094) or Koch (3,958,964) new references.

WO'159 discloses a method for cleaning rectification columns that are used for rectifying (meth) acrylic acid and/ or esters thereof (see page 3, line 12- page 4, line 38, page 6, lines 16-41, and page 10, lines 4-22. The reference discloses the basic liquid (sodium hydroxide) and gas (steam or air) are guided through the column in the counter current. The reference discloses all limitations with the exception of the pressure difference between the pressure in the gas phase immediately above the uppermost tray of the tray column and the pressure in the gas phase immediately below the lowermost tray of the tray column divided by the number of the trays in the column is at least 0.5 mbar per tray, and the range claimed in claims 2-3.

Dunson et al. disclose baffle tray columns can be used as scrubbers for the cleaning of the flue gases. The reference discloses the relation between the difference of the pressure and the

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number of trays. See the abstract, col. 1, lines 28-41, col. 2, lines 30-48, and col. 6, line 5- col. 8, line 35.

Koch discloses a column for bringing gases or vapors and liquids into contact which uses a plurality of plated. See the abstract. The reference discloses the relation between the difference of pressure and the dimension of the column. See col. 1, lines 40-43, claim 1 and col. 5, lines 26-58.

It would have been obvious for one of ordinary skill in the art to incorporate the difference between the pressure in the gas phase immediately above the uppermost tray of the tray column and the pressure in the gas phase immediately below the lowermost tray of the tray column divided by the number of the trays in the column in the WO'159 process to obtain the claimed process. This is because according to Dunson et al. and Koch, one skilled in the art would adjust the difference of the pressure to obtain the optimum results and to enhance the cleaning process.

It would have been obvious for one skilled in the art to incorporate this limitation into the method described in WO'159 as a conventional measure for solving the specified problem because it is known to a person skilled in the art that there is a decline in pressure when a gas stream and a liquid are run countercurrent to each other. The selection of a decline in pressure of at least 0.5 mbar per plate could only be regarded as inventive if this pressure decline of at least 0.5 mbar per plate brings about unexpected effects or properties in relation to the rest of the range. Re. the limitation of claim 7, see page 7. Re. the limitations of claims 8-11, see pages 8 and 9. Re. the limitation of claim 12, see page 10.

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Response to Arguments

1. Applicant's arguments filed 11/24/06 have been fully considered but they are not persuasive. The declaration filed on 11/24/06 has been considered but is ineffective to overcome the WO 01/51159 reference.
2. Regarding the declaration, applicants' argument is unpersuasive, because the specification as originally filed (also the priority document, page 7, line 46) does not include the 16,000 m³/h or 7,500 m³/h as disclosed in the declaration.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is (571) 272-1301.

The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zeinab El-Arini
Zeinab E. EL-Arini
Primary Examiner
Art Unit 1746

ZEE
12/6/06